

Re-stumping - also known as re-blocking in Victoria - is a multi-million dollar business in Australia and unfortunately very few people are aware of the many potential pitfalls in this trade.

Contractors asking for advance payments then disappearing, unexpected damage to walls, windows and plumbing, work having to be redone, squeaking floors, and floors which are more crooked after having been stumped are only some of the problems reported to Archicentre by people who have been caught out, or who have been victims of unscrupulous operators.

In some States, houses with timber floors built more than 30 years ago will mostly have their floors supported on timber stumps. The life expectancy of these stumps can vary from 20 to more than 80 years depending on the type of timber, soil conditions and external influences such as surface drainage and insect attack.

In the course of its inspections, Archicentre has found that up to 30% of timber stumped homes investigated needed immediate re-stumping either partially or completely.

Checking your stumps

Before undertaking renovation work on older homes, it is essential to check the condition of the stumps. Many people have watched in dismay as newly completed alterations have been virtually destroyed as the structure subsides.

In brick houses, where the bearers are supported on brick piers at the ends, rotten stumps will cause a 'trampoline' effect in the centre of rooms. Contrary to popular belief, the condition of stumps in weatherboard homes cannot be definitely confirmed by jumping on the floors.

If the stumps have rotted evenly, the floors may appear firm, however they will almost always slope away from brick fire-places. Other symptoms are crooked door and window frames.

It should be remembered that these symptoms are only evident after the stumps have failed completely. A house may appear quite sound during a visual inspection, but could start to sink shortly afterwards if the stumps have just reached failure point.

The condition of stumps can be ascertained by scratching away 50mm to 100mm of soil from the base of the worst stump to check its condition below the ground.

Stumps deteriorate most quickly in wet conditions and generally the worst stumps are those with the highest and most prominent water marks.

If only a few appear faulty, individual replacement may be the best solution. However, if more than 20% to 30% of stumps show serious deterioration, total re-stumping should be considered.

In Victoria, bulky sub-floor heating ducts can often hamper proper investigation of stumps and supporting walls. Walls and stumps are sometimes removed when ducts are installed, without it being obvious, leading to structural problems.

If you are contemplating installing central heating, the possibility of this happening to you should be considered.

Selection of stumps - Victoria

The first decision to make is to choose the most suitable type of new stumps. Rot-resistant timber stumps, like Victorian red gum are still quite commonly used. Their advantage is that they are still sometimes 10% cheaper than concrete, and although they have the disadvantage of limited life expectancy, this will not affect occupants living in the house for less than 20 years. Perhaps the biggest disadvantage is that timber stumps cannot be as firmly secured to the bearers as concrete stumps so that re-levelling may not be quite as accurate.

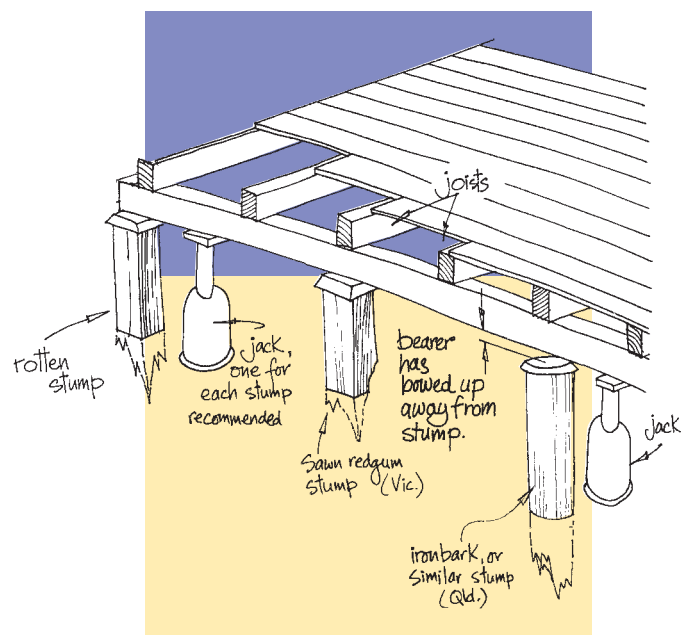
Concrete stumps are available in several types.

The concrete stump with the most positive form of connection is the one with a 10mm diameter threaded rod at the top secured with a

poured concrete pad footing. The threaded rod allows the stump to be bolted to the floor frame preventing both upward and downward movement. The concrete pad will provide protection against long term footing settlement.

A further advantage is that by tightening the nut after the concrete pad has set, and by partially cutting the bowed bearers at their high points, high spots in the floor can be pulled down.

Concrete stumps will last indefinitely except in extremely damp conditions where the metal reinforcement in the stump rusts and expands, causing weakness. This also applies in Queensland.



FIRST STAGE OF RE-STUMPING

It may be necessary to remove several floor boards to gain access to the stumps.

Selection of stumps - Queensland

Stumps in the past were made of 300mm diameter ironbark or similar rot-resistant timber. Now CCA (copper chrome arsenate) treated pine, or concrete stumps are used.

The most positive form of connection to the bearer is a bracket fixed to the stump by a coach screw or bolt. The other end of the bracket is anchored to the bearer by a threaded end and nut. This is also a positive form of stump/bearer connection.

In cases where the ground is unstable (soft), a concrete footing is sometimes poured.

Because of high wind stresses, anchor bolts are required at each corner of a Queensland house, around the perimeter every four metres and under bracing walls. These bolts are also needed in high wind areas of Victoria.

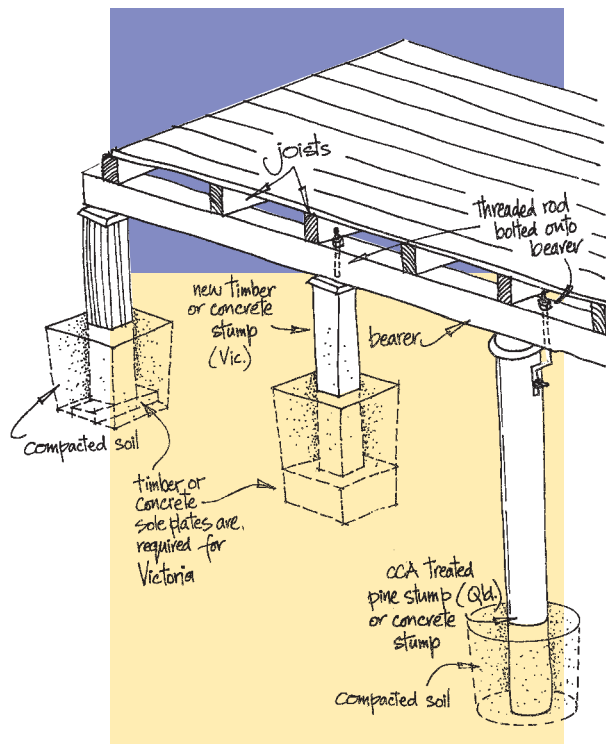
Selecting the right contractor

Having chosen the most appropriate stumping system, extreme care should be taken in selecting a reliable and experienced contractor.

The contractor should have enough hydraulic jacks to lift the building in one or two sections. Generally one jack is required for each stump and



Re-Stumping



THE FLOOR AFTER RE-STUMPING

Both concrete and timber stumps are shown.

there are about 80 stumps in an average 150 sq. metre (16 square) timber house, less for other types of housing like brick veneer (approx. 60). If too few jacks are used, the house will need to be lifted in several sections, which will cause severe and costly damage to plaster-work and framing.

In choosing the contractor, the following points should be made clear when obtaining quotes. These points should also form the basis of a contract between the client and re-blockers:

- The type of stumps (and pads, if appropriate) to be used.
- The spacing of stumps.
- That on completion the floors will be brought reasonably back to level, say within 10mm.
- That the work will be in accordance with the relevant building regulations.
- That a council building permit will be obtained.
- The agreed cost.
- The start and expected completion date.
- That if floorboards must be removed, to what condition the floor will be reinstated and whose responsibility it is to remove and replace coverings.

When comparing quotations from several contractors, ensure that they all include the same items. The lowest price may only be indicative of a lesser number and poor choice of stumps, which may spell disaster in the long term.

After receiving the quotes, check the bona fides of the contractors by asking them to give you the names and telephone numbers of one or two people they have recently done work for. Check that these people are happy with the work, and you may even ring the local council's Building Surveyor in the area where work was carried out and make

sure that the council was satisfied with the job.

After the work has commenced, it is essential that it be supervised carefully. The most common faults are:

- Floors not properly re-levelled. This should be thoroughly checked with a spirit level, or preferably, a dumpy level.
- Stumps not being securely fixed to bearers, (this may eventually result in a noisy floor).
- Stumps not positioned directly underneath the joining of two bearers.
- Stumps not centrally located over pads, where pads are used.
- Failure to provide ant caps between stumps and bearers.

When new stumps have been installed and the jacks removed, the holes should be back filled with well-compacted earth.

The final payment to the contractor should be made only after all work has been completed according to the contract and has been found to be satisfactory.

Remember, the best way of avoiding expensive problems is to be aware of them before you purchase your house or before you undertake repairs and renovations. Archicentre has carried out thousands of home inspections for home owners and prospective buyers, to help them make a realistic appraisal of the property before buying, renovation or repairing.

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